

# EXECUTIVE SUMMARY

## ES-1 INTRODUCTION

The Bureau of Land Management (BLM) has prepared this Draft Environmental Impact Statement (DEIS) to analyze the potential environmental impacts resulting from the revision and updating of the 1987 *Recreation Area Management Plan and Environmental Assessment for the Imperial Sand Dunes*. A revised recreation area management plan (RAMP) would provide direction and guidance on the management of land use and resources of the Imperial Sand Dunes Recreation Area (ISDRA) that would be consistent with current public needs and resources status. Implementing a revised RAMP would also constitute an amendment to the California Desert Conservation Area (CDCA) Plan, in accordance with BLM planning regulations (43 CFR 1610.3-2).

This DEIS is prepared in accordance with National Environmental Policy Act (NEPA) of 1969, as amended, the President's Council on Environmental Quality (CEQ) Guidelines for the implementation of NEPA, and the BLM NEPA Handbook (H-1790-1). The BLM is the lead agency for this DEIS, and maintains primary responsibility for compliance with NEPA for actions on federal lands it manages. In addition, the BLM is responsible for consulting with the United States Fish and Wildlife Service (USFWS) to ensure that the Preferred Alternative complies with the Endangered Species Act (ESA). The USFWS is a cooperating agency under NEPA. Pursuant to NEPA, the environmental consequences of the project alternatives are analyzed in this DEIS.

This Executive Summary includes the following sections:

- ES-2 Background
- ES-3 Purpose and Need
- ES-4 Plan Area
- ES-5 Public Scoping Issues
- ES-6 Project Alternatives
- ES-7 Preferred Alternative
- ES-8 Summary of Impacts

## ES-2 BACKGROUND

The ISDRA, which comprises the largest mass of sand dunes in California, is located in Imperial County. The ISDRA is recognized as a world-class off-highway vehicle (OHV) recreation area to the Southern California region and vicinity because of the outstanding opportunities it presents for OHV

recreational activities. In addition, the ISDRA provides unique habitat for several endemic and sensitive plant, insect, and animal species.

The BLM is required to manage recreational use such that the conditions of special-status species, and other unique natural and cultural resources, are maintained or improved. The type and level of OHV use, in particular, must also be carefully managed to create an environment that promotes the health and safety of visitors, employees, and nearby residents.

Continued population growth in Southern California and the expanding popularity of OHV recreation have resulted in a steady increase in demand for outdoor recreation at the ISDRA. Proportionate to the increase in visitation is the increase in frequency of trespass in the North Algodones Dunes Wilderness and on private lands, which has resulted in conflicts among OHV enthusiasts, landowners, and concerned members of the public. Growing attendance also underlies, in part, the increased incidence of law enforcement violations.

### **ES-3 PURPOSE AND NEED**

The purpose of revising the 1987 RAMP is to develop a comprehensive and detailed management plan consistent with conditions and guiding statutes as they exist at the ISDRA in the early 21st Century. A revised RAMP would provide a variety of sustainable OHV and other recreational activities, and maintain or improve the conditions of special-status species and other unique natural and cultural resources, while creating an environment to promote the health and safety of visitors, employees, and nearby residents.

The need to revise the 1987 RAMP is based on changes that have occurred since 1987, such as special-status species designations and increased the demand for outdoor recreation, that have implications for and indicate the need to revise management approaches at the ISDRA. In addition, since the RAMP was written in 1987, several of the projects identified in that plan have been implemented. Of the projects that were not implemented, some are no longer feasible. Therefore, it is critical for the BLM to revisit some of the past decisions and determine whether or not new courses should be charted.

### **ES-4 PLAN AREA**

The Plan Area encompasses the ISDRA and a buffer management area. It comprises approximately 227,000 acres of land in California, covering an area more than 40 miles long and averaging 5 miles in width. Of this total acreage, approximately 208,000 acres are managed by BLM; 16,000 acres are privately owned; 1,700 acres are owned by the United States military; and 900 acres are owned by California. The Plan Area is shown in Figure 1-2 in Chapter 1 of this DEIS.

## **ES-5 PUBLIC SCOPING ISSUES**

During the public scoping process for the DEIS, the following issues, concerns, and opportunities were raised:

- Level or levels of allowable recreation at the ISDRA
- Management of OHV recreation
- Facility development and access
- Management of vendors/concessionaires
- Tour bus impacts
- Conservation of unique natural resources
- Provision of public information and resource interpretation
- Use of education and enforcement techniques to ensure regulatory compliance
- Definition of “Visitor Supply” at the ISDRA and actions taken when supply is exceeded
- Management of legal and illegal motorized trespass in the North Algodones Dunes Wilderness Area
- Future for the Fee Demo program
- Budget priorities
- Effect of closures on economy and recreation-related opportunities
- Management of noxious weeds
- Management of ISDRA to meet air quality standards

## **ES-6 PROJECT ALTERNATIVES**

The process used in developing the project alternatives included the review and analysis of the purpose and need for the project and oral and written comments received during public scoping. Four project alternatives, which represent the reasonable range of alternatives for purposes of NEPA, are considered in detail in this DEIS:

- Alternative 1: No Action Alternative
- Alternative 2: Recreation and Resource Protection Alternative
- Alternative 3: Natural and Cultural Resource Alternative
- Alternative 4: Motorized Recreation Opportunities Alternative

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Additional alternatives were considered; those eliminated from detailed evaluation are also described in Chapter 2. This DEIS compares the Proposed Action and the other three action alternatives against Alternative 1, as required by NEPA.

The major differences between ISDRA management under Alternative 1 and the three action alternatives is the delineation of management areas, assignment of Recreation Opportunity Spectrum (ROS) classifications to those management areas (see Table ES-1), enhancement of efforts to encourage a safe and enjoyable recreational experience for the user, and emphasis on public education about OHV use in the context of the recreational, cultural, and biological resources of the area. Where facilities are planned, and where law enforcement is planned to be increased, these actions are proposed to enhance public safety in the context of an enjoyable recreational experience.

**Table ES-1 Definition of Recreation Opportunity Spectrum Classifications**

<b>ROS CLASS</b>	<b>BRIEF DESCRIPTION</b>
Primitive (P)	<ul style="list-style-type: none"><li>• Principally unmodified natural environment of a fairly large size</li><li>• Low visitor use</li><li>• Facilities only for resource protection</li><li>• No motorized use</li></ul>
Semi-Primitive Non-Motorized (SPNM)	<ul style="list-style-type: none"><li>• Predominantly unmodified natural environment of moderate-to-large size</li><li>• Low visitor use, but often other area users are evident</li><li>• Facilities provided for the protection of resource values and the safety of users</li><li>• Motorized use is not generally allowed</li></ul>
Semi-Primitive Motorized (SPM)	<ul style="list-style-type: none"><li>• Same as Semi-Primitive Non-Motorized except that motorized use is allowed</li></ul>
Roaded Natural (RN)	<ul style="list-style-type: none"><li>• Resource modification, but harmonize with natural environment</li><li>• Low-to-moderate visitor use</li><li>• Onsite controls and restrictions offer a sense of security</li><li>• Rustic facilities</li><li>• Facilities are sometimes provided for group activity</li><li>• Conventional motorized use in construction standards and design of facilities</li></ul>
Rural (R)	<ul style="list-style-type: none"><li>• Substantially modified natural environment</li><li>• Moderate-to-high visitor use concentration to high</li><li>• Large number of facilities designed for use by many people</li><li>• Developed sites, roads, and trails are designed for moderate to high use</li><li>• Moderate densities are provided far away from developed sites</li><li>• Facilities for intensive motorized use are available</li></ul>

**Table ES-1 Definition of Recreation Opportunity Spectrum Classifications**

ROS CLASS	BRIEF DESCRIPTION
Urban (U)	<ul style="list-style-type: none"> <li>Substantially urbanized environment</li> <li>Vegetative cover is often exotic and manicured</li> <li>Large numbers of users can be expected both onsite and in nearby areas</li> <li>Facilities for highly intensified motor use and parking are available</li> </ul>

### **ES-6.1 No Action Alternative (Alternative 1)**

Under Alternative 1, the ISDRA would continue to be managed according to the existing and approved management plan and policies (e.g., the 1987 RAMP). In addition, Alternative 1 would include compliance with policies and management measures instituted since the 1987 RAMP was first implemented. The CDCA Plan would not be amended under this alternative, and no adaptive management program would be implemented. In addition, the management areas, and associated ROS classifications, which would apply to the action alternatives (see Section ES-6.2), would not be created.

### **ES-6.2 Action Alternatives (Alternatives 2, 3, and 4)**

Management actions that are common to all the action alternatives are listed in Table ES-2. ROS classifications for each action alternative are listed in Table ES-3. Additional attributes of the project alternatives are summarized in more detail in Chapter 2 of this DEIS.

**Table ES-2 Common Management Actions Applicable to Action Alternatives**

RESOURCE AREA	MANAGEMENT ACTION
Recreation	Maintain and manage ISDRA as a unique recreational locale
Public Outreach	Develop a public relations program on cultural and natural resources; safety
Biological Resources	Manage using principles of adaptive management
Air Quality	Implement dust control measures on wash roads and install air monitoring equipment
Transportation/Traffic	Grade roads and implement fee entry and construct traffic control
Public Safety	<ul style="list-style-type: none"> <li>Create a law enforcement cooperative team</li> <li>Increase permanent staff and holiday staff to address the increases in visitor use of major holidays</li> <li>Ban alcohol outside camping areas</li> <li>Establish a sundown to sunup closure at Competition Hill north and south, Oldsmobile Hill, Test Hill, and Patton Valley</li> <li>Post speed limits</li> <li>Develop and maintain radio system</li> <li>Continue existing condition of dispatching duties from Cahuilla Ranger Station</li> </ul>

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**Table ES-2 Common Management Actions Applicable to Action Alternatives**

RESOURCE AREA	MANAGEMENT ACTION
Visitor Use	<ul style="list-style-type: none"> <li>Establish ROS classifications and visitor use targets for management areas</li> <li>Limit ISDRA use of OHVs if visitation exceeds proposed ROS classifications</li> </ul>
Land Use	Establish management areas with specific ROS classifications
Commercial	<ul style="list-style-type: none"> <li>Allow vending from October 1 through May 31 on Friday through Sunday</li> <li>Nonrecreational commercial activities not allowed during holidays</li> </ul>
Access and Facilities Development	<ul style="list-style-type: none"> <li>Develop or retrofit facilities as necessary</li> <li>Ensure that little or no development occurs in primitive areas</li> <li>Construct disability compliant trash collection facilities (and loading docks)</li> </ul>
Fiscal	<ul style="list-style-type: none"> <li>Collect fees in all areas based on demand and cost recovery</li> <li>Review price structure every 2 years</li> <li>Update fee business plan within 2 years of Record of Decision (ROD)</li> </ul>

**Table ES-3 ROS Classifications Proposed for Action Alternatives**

MANAGEMENT AREAS	ALTERNATIVE 2: RECREATION AND RESOURCE PROTECTION	ALTERNATIVE 3: NATURAL AND CULTURAL RESOURCE	ALTERNATIVE 4: MOTORIZED RECREATION OPPORTUNITIES
Mammoth	Semi-Primitive Motorized	Semi-Primitive Non-Motorized	Roaded Natural
North Algodones Dunes	Semi-Primitive Non-Motorized	Semi-Primitive Non-Motorized	Semi-Primitive Non-Motorized
Gecko	Rural	Roaded Natural	Urban
Glamis	Roaded Natural	Semi-Primitive Motorized	Rural
Adaptive Management	Semi-Primitive Motorized	Semi-primitive Non-Motorized	Roaded Natural
Ogilby	Roaded Natural	Semi-Primitive Motorized	Rural
Dune Buggy Flats	Roaded Natural	Semi-Primitive Motorized	Rural
Buttercup	Rural	Roaded Natural	Urban
Buffer	Semi-Primitive Motorized	Semi-Primitive Non-Motorized	Semi-Primitive Motorized

## ES-7 PREFERRED ALTERNATIVE

A Preferred Alternative is not identified in this DEIS. The Preferred Alternative will be identified in the Final EIS, after the lead agency has had the opportunity to review comments on the DEIS.

## ES-8 SUMMARY OF IMPACTS

This section presents Table ES-5, a comparative summary of the environmental consequences of implementing the project alternatives on the resources listed below. The affected environment for each of these resource areas is presented in Chapter 3, Affected Environment.

- Recreation Resources
- Biological Resources
- Law Enforcement and Public Safety
- Socioeconomics
- Land Use and Land Ownership
- Visual Resources
- Water Resources
- Cultural Resources
- Transportation and Traffic
- Noise
- Air Quality
- Hazardous Materials
- Geology, Energy, and Mineral Resources

The environmental consequences are evaluated and discussed in more detail in Chapter 4, Environmental Consequences, and Chapter 5, Cumulative Effects, of this DEIS.

### ES-8.1 Cumulative Impacts

Chapter 5, Cumulative Effects, addresses potential cumulative impacts to the environment associated with implementation of the project alternatives in concert with one or more other past, present, and reasonably foreseeable future actions and projects. As described in Chapter 4, Environmental Consequences, the individual impacts of each project alternative will vary based on the proposed area of disturbance and type and intensity of allowable recreational activities of each alternative. Table ES-4 summarizes the overall, potential cumulative impacts from the project alternatives when implemented in combination with other management strategies on public and private lands and other development projects.

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**Table ES-4 Summary of Cumulative Impacts**

RESOURCE AREA	CUMULATIVE IMPACT <sup>1</sup>
Recreation Resources	Increased demand of OHV opportunities on public lands and the potential for overcrowding at other OHV-accessible public areas across the desert Southwest
Socioeconomics	Potential reduction in the number of visitors at publicly owned recreation areas, thereby adversely affecting the regional economy in the CDCA
Remaining Resource Areas	No cumulative impacts.

<sup>1</sup>The cumulative impacts resulting from implementation of each project alternative will vary based on the proposed area of disturbance and type and intensity of allowable recreational activities of each alternative.

Table ES-5 Summary of Impacts and Mitigation Measures for the Project Alternatives

IMPACT/MITIGATION	ALTERNATIVE 1: NO ACTION	ALTERNATIVE 2: RECREATION AND RESOURCE PROTECTION	ALTERNATIVE 3: NATURAL AND CULTURAL RESOURCE	ALTERNATIVE 4: MOTORIZED RECREATION OPPORTUNITIES
<b>RECREATION RESOURCES (SECTION 4.1)</b>				
Impact	<p>Implementation of this alternative would provide for some recreation improvements, as outlined in the 1987 RAMP. These improvements would provide benefits to the recreationists who visit those areas.</p> <p>Increased visitor use would present management challenges for ISDRA staff, and potentially affects public safety and the quality and type of recreation experience provided at ISDRA (see Section 4.3, Law Enforcement and Public Safety). As more recreationists visit ISDRA simultaneously, the recreation experience changes to become more urban in character, and could result in compatibility impacts among recreationists at ISDRA.</p>	<p>The conservation of unique recreation opportunities afforded by ISDRA, such as those associated with the Semi-Primitive Motorized and Roaded Natural ROS classes, is considered a beneficial impact.</p> <p>Total visitor supply over the course of the season is expected to be sufficient to meet projected demand. Management actions that result in the distribution of visits to non-holiday weekends would not adversely impact the recreation experience at ISDRA.</p> <p>Osborne Overlook would be closed to camping with implementation of this alternative. This would eliminate a recreational benefit that is offered by the baseline condition.</p> <p>Beneficial impacts to recreation resources will result from facility development. This includes pit toilet facilities in Glamis Flats, The Washes, and Dune Buggy Flats, interpretive facilities, parking, and a law enforcement facility in Buttercup, and updating the kiosks at the Wildlife Viewing.</p>	<p>The conservation of unique recreation opportunities afforded by ISDRA, such as those associated with the Semi-Primitive Motorized and Roaded Natural ROS classes, is considered a beneficial impact.</p> <p>The estimate of future visits would exceed the annual visitor supply and not all recreationists desiring to attend ISDRA could be accommodated. This is considered an adverse impact.</p> <p>Osborne Overlook would be closed to camping with implementation of this alternative. This would eliminate a recreational benefit that is offered by the baseline condition.</p> <p>Beneficial impacts to recreation resources will result from facility development. This includes pit toilet facilities in Glamis Flats, The Washes, and Dune Buggy Flats, interpretive facilities, parking, and a law enforcement facility in Buttercup, and updating the kiosks at the Wildlife Viewing.</p>	<p>The conservation of unique recreation opportunities afforded by ISDRA, such as those associated with the Rural, Roaded Natural, and Semi-Primitive Motorized ROS classes, is considered a beneficial impact.</p> <p>Total visitor supply would be greater under this Alternative than under Alternatives 2 and 3. The total visitor supply over the course of the season would be sufficient to meet projected demand. Management actions that result in the distribution of visits to non-holiday weekends would not adversely impact the recreation experience at ISDRA.</p> <p>This alternative would not include updating the kiosks at the Wildlife Viewing Area; therefore, no recreational benefit in this location would be recognized by visitors.</p> <p>Osborne Overlook would remain open to camping with implementation of this alternative, and certain improvements would be completed. This would result in a recreational benefit to visitors.</p> <p>In the Buttercup Management Area, interpretive facilities and</p>

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**Table ES-5 Summary of Impacts and Mitigation Measures for the Project Alternatives**

<b>IMPACT/MITIGATION</b>	<b>ALTERNATIVE 1: NO ACTION</b>	<b>ALTERNATIVE 2: RECREATION AND RESOURCE PROTECTION</b>	<b>ALTERNATIVE 3: NATURAL AND CULTURAL RESOURCE</b>	<b>ALTERNATIVE 4: MOTORIZED RECREATION OPPORTUNITIES</b>
				parking would be developed near Grays Well Road and a law enforcement facility would be constructed. In the Glamis Management Area, new campgrounds, camping pads, pit toilet facilities, trash stations, and information kiosks would be provide. These additional facilities would result in a beneficial impact.
Mitigation Measures	The expected growth in visitation would require more law enforcement personnel, medical services personnel, recreation staff, and associated resources to manage the increased number of visitors.			
<b>BIOLOGICAL RESOURCES (SECTION 4.2)</b>				
Habitat Types				
Impact	Impacts expected to continue similar to baseline conditions.	Based on projected visitor use increases, impacts to habitat are expected to decrease relative to the baseline. However, impacts to habitat within the Adaptive and Buffer Zone Management Areas are expected to substantially decrease relative to the baseline. Because OHV use would be controlled within the Adaptive Management Area, minor impacts to habitat are anticipated.	Based on the projected slight increase in visitor use, and ROS class impacts to habitats are expected to decrease relative to the baseline. Minor facility development, campground improvements, and road maintenance are anticipated to result in similar, but lessened, impacts. However, no impacts to habitat are expected within the Mammoth, North Algodones Dunes Wilderness, Buffer Zone, and Adaptive Management Areas due to the closures.	Based on the projected visitor use increases and ROS classifications, impacts to habitats are expected to increase. Increased facility development, campground improvements, and road maintenance are anticipated to result in increased impacts. With the ROS designation of the Glamis Management Area as Roaded Rural and Adaptive Management Area as Roaded Natural, impacts to habitat are anticipated to increase in these management areas.

Table ES-5 Summary of Impacts and Mitigation Measures for the Project Alternatives

IMPACT/MITIGATION	ALTERNATIVE 1: NO ACTION	ALTERNATIVE 2: RECREATION AND RESOURCE PROTECTION	ALTERNATIVE 3: NATURAL AND CULTURAL RESOURCE	ALTERNATIVE 4: MOTORIZED RECREATION OPPORTUNITIES
Mitigation Measures	No use of Adaptive Management to monitor and, if necessary, to reduce impacts. Standard construction mitigation measures would apply.	Enforcement of the Adaptive and Buffer Zone Management Areas would include installation and maintenance of signage as well as Ranger patrols. Use of Adaptive Management to monitor and, if necessary, reduce impacts would be implemented. Standard construction mitigation measures would apply.	Enforcement of the closures would include installation and maintenance of signage as well as increased Ranger patrols. Use of Adaptive Management to monitor and, if necessary, reduce impacts would be implemented. Standard construction mitigation measures would apply.	Use of Adaptive Management to monitor and, if necessary, reduce impacts would be implemented. Standard construction mitigation measures would apply.
<i>Special-Status Plants</i>				
Impact	No expected increase in impacts relative to the baseline.	Based on the projected visitor use increases and ROS classifications, impacts to special-status plants are expected to decrease relative to the baseline. Impacts to special-status plants within the Adaptive and Buffer Zone Management Areas are expected to substantially decrease relative to the baseline. Because OHV use would be controlled within the Adaptive Management Area, minor impacts to special-status plants are anticipated.	Based on the projected slight increases in visitor use, impacts to special-status plants are expected to decrease relative to the baseline. Minor facility development, campground improvements, and road maintenance are anticipated to result in similar, but lessened, impacts relative to the baseline. However, no impacts to special status plants are expected within the Mammoth, North Algodones Dunes Wilderness, Buffer Zone, and Adaptive Management Areas due to the closures.	Impacts would increase relative to the baseline. Substantially increased facility development, campground improvements, and road maintenance are anticipated to result in substantially increased impacts. With the ROS designation of the Glamis Management Area as Rural and the Adaptive Management Area as Roaded Natural, impacts to special-status plants are anticipated to increase in these management areas.
Mitigation Measures	No use of Adaptive Management to monitor and, if necessary, reduce impacts. Standard mitigation measures would apply.	Enforcement of the Adaptive and Buffer Zone Management Areas would include installation and maintenance of signage as well as Ranger patrols. Use of Adaptive Management to monitor and, if necessary, reduce impacts would be implemented. Standard construction mitigation measures would apply.	Enforcement of the closures would include installation and maintenance of signage as well as increased Ranger patrols. Use of Adaptive Management to monitor and, if necessary, reduce impacts would be implemented. Standard construction mitigation measures would apply.	Use of Adaptive Management to monitor and, if necessary, reduce impacts would be implemented. Standard construction mitigation measures would apply.

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**Table ES-5 Summary of Impacts and Mitigation Measures for the Project Alternatives**

IMPACT/MITIGATION	ALTERNATIVE 1: NO ACTION	ALTERNATIVE 2: RECREATION AND RESOURCE PROTECTION	ALTERNATIVE 3: NATURAL AND CULTURAL RESOURCE	ALTERNATIVE 4: MOTORIZED RECREATION OPPORTUNITIES
<i>Special-Status Wildlife</i>				
Impact	No expected increase in impacts relative to the baseline.	Similar relative decrease in impacts as described for special status plants.	Similar relative decrease in impacts as described for special status plants.	Similar relative increase in impacts as described for special status plants.
Mitigation Measures	No use of Adaptive Management to monitor and, if necessary, reduce impacts. Standard mitigation measures would apply.	Similar mitigation measures as described for special status plants.	Similar mitigation measures as described for special-status plants.	Similar mitigation measures as described for special-status plants.
<b>LAW ENFORCEMENT AND PUBLIC SAFETY (SECTION 4.3)</b>				
Impact	Illegal /anti-social and dangerous behavior would continue or increase and less-than-optimal emergency response times would remain the same or increase in length due to current limited law enforcement staff.	Beneficial impact to public safety as a result of more focused allocation of law enforcement staff and enforcement of proposed management actions (e.g. posting speed limits, banning of alcohol outside camping areas, building an additional ranger station, and other management actions designed to maximize public safety). However changes in visitor use patterns requiring correlation to staffing levels would result from implementation of proposed management actions are expected.	Similar beneficial impact to public safety as compared to Alternative 2 as a result of increased patrols and law enforcement presence and enforcement of proposed management actions	Potential adverse effects to public safety if increases in permanent law enforcement staff are not increased relative to visitor use patterns.
Mitigation Measures	None required.	None required.	None required.	None required.

Table ES-5 Summary of Impacts and Mitigation Measures for the Project Alternatives

IMPACT/MITIGATION	ALTERNATIVE 1: NO ACTION	ALTERNATIVE 2: RECREATION AND RESOURCE PROTECTION	ALTERNATIVE 3: NATURAL AND CULTURAL RESOURCE	ALTERNATIVE 4: MOTORIZED RECREATION OPPORTUNITIES
<b>SOCIOECONOMICS (SECTION 4.4)</b>				
Impact	<p><u>Imperial County:</u> Estimated trip expenditures range from \$142.6 million to \$352.8 million. The ISDRA would contribute 2,897 to 7,790 in direct employment and between \$56.8 million and \$140.4 million in direct personal income to the County economy. Visitor expenditures result in 287 to 727 in indirect employment and between 394 and 978 in induced employment. The visitor expenditures would also generate between \$8.6 million and \$21.6 million in indirect personal income and between \$9.7 million and \$24.2 million in induced personal income.</p> <p><u>Yuma County:</u> Estimated trip expenditures range from \$6.7 million to \$16.6 million. The ISDRA would contribute 137 to 377 in direct employment and between \$2.3 million and \$5.8 million in direct personal income to the Yuma County economy. Visitor expenditures result in 23 to 57 in indirect employment in the region and between 21 and 54 in induced employment. The visitor expenditures also generate between \$0.5 million and \$1.4 million in indirect personal income to the region, and between \$0.5 million and</p>	<p><u>Imperial County:</u> Estimated trip expenditures range from \$112.8 million to \$278.9 million. The ISDRA would contribute 2,290 to 6,158 in direct employment and between \$44.9 million and \$111.0 million in direct personal income. Visitor expenditures result in 227 to 574 in indirect employment and between 312 and 773 in induced employment. The visitor expenditures would also generate between \$6.8 million and \$17.0 million in indirect personal income and between \$7.7 million and \$19.1 million in induced personal income.</p> <p><u>Yuma County:</u> Estimated trip expenditures range from \$5.3 million to \$13.1 million. The ISDRA would contribute 108 to 298 in direct employment and between \$1.8 million and \$4.6 million in direct personal income. Visitor expenditures result in 18 to 45 in indirect employment and between 17 and 42 in induced employment. The visitor expenditures also generate between \$0.4 million and \$1.1 million in indirect personal income and between \$0.4 million and \$0.9 million in induced personal income.</p> <p>The anticipated increase in regional employment and income</p>	<p><u>Imperial County:</u> Estimated trip expenditures range from \$102.5 million to \$253.5 million. The ISDRA would contribute 2,081 to 5,597 in direct employment and between \$40.8 million and \$100.9 million in direct personal income. Visitor expenditures result in 283 to 522 in indirect employment in the region and between 283 and 703 in induced employment. The visitor expenditures would also generate between \$6.1 million and \$15.5 million in indirect personal income and between \$7.0 million and \$17.4 million in induced personal income.</p> <p><u>Yuma County:</u> Estimated trip expenditures range from \$4.8 million to \$11.9 million. The ISDRA would contribute 99 to 271 in direct employment and between \$1.7 million and \$4.2 million in direct personal income. Visitor expenditures result in 16 to 41 in indirect employment and between 15 and 39 in induced employment. The visitor expenditures also generate between \$0.4 million and \$1.0 million in indirect personal income and between \$0.3 million and \$0.8 million in induced personal income.</p> <p>The anticipated increase in regional employment and income</p>	<p><u>Imperial County:</u> Estimated trip expenditures range from \$124.0 million to \$306.6 million. The ISDRA would contribute 2,518 to 6,771 in direct employment and between \$49.4 million and \$122.1 million in direct personal income. Visitor expenditures result in 250 to 632 in indirect employment and between 343 and 850 in induced employment. The visitor expenditures would also generate between \$7.4 million and \$18.7 million in indirect personal income and between \$8.5 million and \$21.0 million in induced personal income.</p> <p><u>Yuma County:</u> Estimated trip expenditures range from \$5.8 million to \$14.5 million. The ISDRA would contribute 119 to 328 in direct employment and between \$2.0 million and \$5.1 million in direct personal income. Visitor expenditures result in 20 to 50 in indirect employment in the region and between 19 and 47 in induced employment. The visitor expenditures also generate between \$0.5 million and \$1.2 million in indirect personal income and between \$0.4 million and \$1.0 million in induced personal income.</p>

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<b>IMPACT/MITIGATION</b>	<b>ALTERNATIVE 1: NO ACTION</b>	<b>ALTERNATIVE 2: RECREATION AND RESOURCE PROTECTION</b>	<b>ALTERNATIVE 3: NATURAL AND CULTURAL RESOURCE</b>	<b>ALTERNATIVE 4: MOTORIZED RECREATION OPPORTUNITIES</b>
	\$1.2 million in induced personal income.  The anticipated increase in regional employment and income in Imperial and Yuma Counties represents a beneficial impact.	in Imperial and Yuma Counties represents a beneficial impact.	in Imperial and Yuma Counties represents a beneficial impact.	The anticipated increase in regional employment and income in Imperial and Yuma Counties represents a beneficial impact.
Mitigation Measures	None required.	None required.	None required.	None required.
<b>LAND USE AND LAND OWNERSHIP (SECTION 4.5)</b>				
Impact	No impact.	No impact.	Inconsistency with CDCA Plan.	Inconsistency with CDCA Plan.
Mitigation Measures	None required.	None required.	None required.	None required.
<b>VISUAL RESOURCES (SECTION 4.6)</b>				
Impact	No impacts anticipated.	Updating kiosks at the Wildlife Viewing Area and reducing dust through application of a palliative on Wash Road would provide beneficial visual impacts. Development of new facilities would be consistent with existing Visual Resource Management (VRM) categories and would not adversely impact visual resources at ISDRA.	Same as Alternative 2.	Same as Alternative 2.
Mitigation Measures	None required.	The following measures should be applied to all new facilities and physical improvements in the ISDRA to ensure they harmonize with the natural landscape. <ul style="list-style-type: none"> <li>Within the North Algodones Dunes Wilderness Areas, no improvements to roadways, new interpretive signs and kiosks, or establishment of vendor areas should occur in this VRM Class 1 area.</li> </ul>	Same as Alternative 2.	Same as Alternative 2.

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		<ul style="list-style-type: none"> <li>When updating the kiosks at the Wildlife Viewing Area in the VRM Class 1 area (North Algodones Dunes Wilderness Area), use materials that harmonize with the natural landscape.</li> <li>Additional interpretive signs, kiosks, and vendor areas should occur in VRM Class 3 or 4 areas only. By definition, interpretive signs and kiosks and vendor areas should attract attention; therefore, they should not be developed in Class 1 or 2 areas.</li> </ul>		
<b>WATER RESOURCES (SECTION 4.7)</b>				
<i>Surface Water</i>				
Impacts	No significant adverse impacts anticipated.	No significant adverse impacts anticipated.	No impacts anticipated.	No significant adverse impacts anticipated.
Mitigation Measures	None required.	None required.	None required.	None required.
<i>Groundwater</i>				
Impacts	No significant adverse impacts anticipated.	No significant adverse impacts anticipated.	No significant adverse impacts anticipated.	No significant adverse impacts anticipated.
Mitigation Measures	None required.	None required.	None required.	None required.
<i>Wildlife Guzzler</i>				
Impacts	Potential adverse impact to surface wildlife guzzlers due to lack of management response to increased visitation.	Potential adverse impact to surface wildlife guzzlers would be less than under Alternative 1 due to the application of management procedures to address increased visitation.	No impact: areas with wildlife guzzlers would be closed to OHV use.	No impact: areas with wildlife guzzlers would be closed to OHV use.

## Executive Summary

**Table ES-5 Summary of Impacts and Mitigation Measures for the Project Alternatives**

<b>IMPACT/MITIGATION</b>	<b>ALTERNATIVE 1: NO ACTION</b>	<b>ALTERNATIVE 2: RECREATION AND RESOURCE PROTECTION</b>	<b>ALTERNATIVE 3: NATURAL AND CULTURAL RESOURCE</b>	<b>ALTERNATIVE 4: MOTORIZED RECREATION OPPORTUNITIES</b>
Mitigation Measures	To avoid potential adverse impacts to the two wildlife guzzlers in the Mammoth Management Area, the area in the immediate vicinity of the guzzlers, will be closed to OHV use.	To avoid potential adverse impacts to the two wildlife guzzlers in the Mammoth Management Area, the area in the immediate vicinity of the guzzlers, will be closed to OHV use.	None required.	None required.
<b>CULTURAL RESOURCES (SECTION 4.8)</b>				
Impact	Potential impacts due to the degree of access and relative area of disturbance by OHV activity would be greater than Alternatives 2 and 3, and less than Alternative 4.	Potential impacts due to the degree of access and relative area of disturbance by OHV activity would be greater than Alternative 3, and less than Alternatives 2 and 4.	Potential impacts due to the degree of access and relative area of disturbance by OHV activity would be less than all other alternatives (2, 3 and 4).	Potential impacts due to the degree of access and relative area of disturbance by OHV activity would be greater than all other alternatives (1, 2, and 3).
Mitigation Measures	Potential impacts to cultural resources will be addressed under the 1997 BLM National Protocol Agreement (NPA), supported by the State Protocol Agreement between the California Director of the BLM and the State Historic Preservation Officer (SHPO). Under the NPA and State Protocol Agreement, BLM will meet National Historic Preservation Act requirements for addressing effects to historic properties.	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1
<b>TRANSPORTATION AND TRAFFIC (SECTION 4.9)</b>				
Impact	Impacts during future peak-hour traffic on major holidays would be adverse, but not significant.	Potential adverse impacts during future peak-hour traffic on major holidays would be less than under Alternative 1.	Potential adverse impacts during future peak-hour traffic on major holidays would be less than under Alternatives 1 and 2.	Potential adverse impacts during future peak-hour traffic on major holidays would be less than under Alternative 1, and greater than Alternatives 2 and 3.

Table ES-5 Summary of Impacts and Mitigation Measures for the Project Alternatives

IMPACT/MITIGATION	ALTERNATIVE 1: NO ACTION	ALTERNATIVE 2: RECREATION AND RESOURCE PROTECTION	ALTERNATIVE 3: NATURAL AND CULTURAL RESOURCE	ALTERNATIVE 4: MOTORIZED RECREATION OPPORTUNITIES
Mitigation Measures	A Traffic Control Plan (TCP) will be implemented that would include advance portable changeable message signs on the freeway and local roads to provide motorist information and direct traffic to alternative exits, as well as the dispatching of Rangers and California Highway Patrol officers to freeway exits and intersections along access routes to direct traffic and provide quick response to traffic incidents.			
<b>NOISE (SECTION 4.10)</b>				
Impact	Short-term construction noise and long-term higher ambient noise levels resulting from increased OHV activity would not affect any sensitive noise receptors, and no adverse impacts would result.	Short-term construction noise would be temporary and would not affect any sensitive noise receptors. Long-term ambient noise levels would be less than under Alternative 1, and would not affect sensitive noise receptors. No adverse impacts would result.	Short-term construction noise would be temporary and would not affect any sensitive noise receptors. Long-term ambient noise levels would be less than under Alternatives 1 and 2, and would not affect sensitive noise receptors. No adverse impacts would result.	Short-term construction noise would be temporary and would not affect any sensitive noise receptors. Long-term ambient noise levels would be less than under Alternative 1, and greater than under Alternative 2 and 3. No adverse impacts would result.
Mitigation Measures	None required.	None required.	None required.	None required.
<b>AIR QUALITY (SECTION 4.11)</b>				
<i>Annual Emissions</i>				
Impact	Total net emissions would exceed <i>de minimis</i> threshold levels	Net change in annual emissions would be below <i>de minimis</i> threshold levels, and less than under Alternative 1.	Net change in annual emissions would be below <i>de minimis</i> threshold levels, and less than under Alternatives 1 and 2.	No change in net emissions, and no exceedance of <i>de minimis</i> threshold levels. Emissions would be greater than under Alternative 2 and 3, and less than under Alternative 1.
Mitigation Measures	<ul style="list-style-type: none"> <li>Apply nontoxic chemical soil stabilizers to all active staging areas (unpaved</li> </ul>	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1

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**Table ES-5 Summary of Impacts and Mitigation Measures for the Project Alternatives**

IMPACT/MITIGATION	ALTERNATIVE 1: NO ACTION	ALTERNATIVE 2: RECREATION AND RESOURCE PROTECTION	ALTERNATIVE 3: NATURAL AND CULTURAL RESOURCE	ALTERNATIVE 4: MOTORIZED RECREATION OPPORTUNITIES
	graded areas for OHV and visitors' parking). <ul style="list-style-type: none"> <li>• Pave parking lots and access roads at least 100 feet onto the site from main road or highway.</li> <li>• Reduce traffic speeds on all unpaved roads to 15 mph or less.</li> <li>• Suspend all operations when wind speeds exceed 25 mph.</li> <li>• Sweep all paved streets once a day if visible sand materials are carried to adjacent streets</li> <li>• Configure access roads and parking lots to minimize traffic interference and idle exhaust emission.</li> <li>• Provide temporary traffic control during peak OHV activities to improve traffic flow (e.g., flagperson).</li> <li>• Suspend all OHV operations during second-stage smog alerts.</li> </ul>			
<i>Peak Daily Emissions</i>				
Impact	Increased emissions would exceed Imperial County Pollution Control District (IACPD) daily threshold criteria.	Net peak daily emissions would be below IACPD daily threshold criteria, and less than under Alternative 1.	Net peak daily emissions would not exceed IACPD daily threshold criteria, and would be less than under Alternatives 1 and 2.	No change in net emissions, and no exceedance of IACPD daily threshold criteria. Emissions would be greater than under Alternative 2 and 3, and less than under Alternative 1.
Mitigation Measures	See mitigation provided above for annual emissions.	See mitigation provided above for annual emissions.	See mitigation provided above for annual emissions.	See mitigation provided above for annual emissions.

Table ES-5 Summary of Impacts and Mitigation Measures for the Project Alternatives

IMPACT/MITIGATION	ALTERNATIVE 1: NO ACTION	ALTERNATIVE 2: RECREATION AND RESOURCE PROTECTION	ALTERNATIVE 3: NATURAL AND CULTURAL RESOURCE	ALTERNATIVE 4: MOTORIZED RECREATION OPPORTUNITIES
<b>HAZARDOUS MATERIALS (SECTION 4.12)</b>				
Impacts	Potential adverse impact relating to accidental spills of fuels, oils, grease and other OHV-related substances.	Potential adverse impact relating to accidental spills of fuels, oils, grease and other OHV-related substances would be less than under Alternative 1.	Potential adverse impact relating to accidental spills of fuels, oils, grease and other OHV-related substances would be less than under Alternatives 1 and 2.	Potential adverse impact relating to accidental spills of fuels, oils, grease and other OHV-related substances would be less than under Alternative 1, and greater than Alternatives 2 and 3.
Mitigation Measures	No significant impacts are anticipated. However, the BLM would provide education materials relating to the storage and use of hazardous materials related to OHV recreational use. Examples include educational materials and/or kiosks for the storage, handling, and disposal of hazardous materials in accordance with manufacturers' directions.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
<b>GEOLOGY, ENERGY, AND MINERAL RESOURCES (SECTION 4.13)</b>				
<i>Soils and Geology</i>				
Impact	Erosion impacts resulting from OHV activities would be greater for Alternative 1 than under Alternatives 2 and 3 and less than under Alternative 4. However, the area available for OHV use under Alternative 1 would be comparable to the baseline conditions, and the impact would be commensurate; therefore, adverse impacts are not anticipated.	The erosional impacts and soils compaction would be greater than under Alternative 3 and less than under Alternatives 1 and 4. However, the area available for OHV use would be less than baseline conditions, and the intensity of use would be more constrained. Therefore, adverse impacts are not anticipated.	The impact resulting from OHV activities, erosion and soil compaction would be less under this alternative than under any of the other alternatives. Because the impacted area and levels of intensity of use would be less than existing conditions, significant adverse impacts are not anticipated.	Impacts to soils and erosion would be greater than under any of the other alternatives. The area available for OHV use would be as great as under existing conditions, but the impacts would be greater due to a higher level of use allowed in the open areas. Therefore, adverse impacts are anticipated.

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**Table ES-5 Summary of Impacts and Mitigation Measures for the Project Alternatives**

<b>IMPACT/MITIGATION</b>	<b>ALTERNATIVE 1: NO ACTION</b>	<b>ALTERNATIVE 2: RECREATION AND RESOURCE PROTECTION</b>	<b>ALTERNATIVE 3: NATURAL AND CULTURAL RESOURCE</b>	<b>ALTERNATIVE 4: MOTORIZED RECREATION OPPORTUNITIES</b>
Mitigation Measures				
<i><b>Energy Resources</b></i>				
Impact	No adverse impacts anticipated.	No adverse impacts anticipated.	No adverse impacts anticipated.	No adverse impacts anticipated.
Mitigation Measures				
<i><b>Mineral Resources</b></i>				
Impact	No adverse impacts anticipated.	No adverse impacts anticipated.	No adverse impacts anticipated.	No adverse impacts anticipated.
Mitigation Measures				
<i><b>Seismic Hazards</b></i>				
Impact	No adverse impacts anticipated.	No adverse impacts anticipated.	No adverse impacts anticipated.	No adverse impacts anticipated.
Mitigation Measure				